

**ENVIRONMENTAL PROTECTION AGENCY (EPA Region 9)**

**California Air Resource Board**

**Project Title:** Nonroad Renewable Diesel Emissions Testing

**CARB Technical Contact:** Gavin Hoch Tel: 916-324-0839  
E-mail: gavin.hoch@arb.ca.gov

**Administrative Contact:** Mary Hung Tel: 916-324-9907  
E-mail: mary.hung@arb.ca.gov

**Funding Awarded:** \$150,000

**Completion Date:** April 2020

**Project Description:**

Initial data from emissions tests on heavy-duty on-highway engines without after treatment devices suggest renewable diesel (RD) can reduce emissions of NOx and PM. However, further testing is needed to confirm the magnitude of these reductions in a variety of applications, especially in nonroad engines. The emission benefits in the on-highway applications have spurred recent interest in using this fuel in nonroad applications, such as locomotives, agricultural/construction equipment, and marine vessels, where there is a larger gap in near-term zero emission technology development and deployment. This funding will help support joint efforts with the University of California Riverside, College of Engineering – Center for Environmental Research and Technology (UCR CE-CERT) to test emissions of RD in both on-road and nonroad applications. The \$150,000 from Region 9 EPA will go towards CARB's currently proposed engine and fuel test matrix by adding a Tier 2 or lower, pre-aftertreatment nonroad engine into the emissions test plan, and the testing will compare 100 percent RD (R100) and potentially other RD and biodiesel blends to CARB ultra-low sulfur diesel (ULSD).

**Option:**

The San Joaquin Valley Air Pollution Control District (SJVAPCD or "District") has extensive incentive programs co-funded by CARB and USEPA to assist in meeting regulatory requirements to reduce criteria pollutant emissions. One potential option to obtain the nonroad, low tier engine for use in emissions testing would be through our partners at SJVAPCD. District staff will help identify an operable agricultural tractor funded for replacement with USEPA funds through their [ [HYPERLINK "http://valleyair.org/grants/tractorreplacement.htm"](http://valleyair.org/grants/tractorreplacement.htm) ]. Should this option be exercised, a portion of the Region 9 EPA \$150,000 funds will be used to fund shipping/dismantling costs.